

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows. This listing of claims will replace all prior listings.

1. (PREVIOUSLY PRESENTED) A vortex generator for a surface which generates a primary tip vortex, said vortex generator comprising:

a plurality of vorticity generating protuberances defined upon a distal end of a tip defined between an upper and lower aerodynamic surface to generate small-scale vortices that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip such that a decay rate of the core is accelerated.

2. (CANCELED)

3. (PREVIOUSLY PRESENTED) The vortex generator as recited in claim 1, wherein said surface comprises a rotating aerodynamic surface, said plurality of vorticity generating protuberances located generally parallel to a feathering axis.

4. (PREVIOUSLY PRESENTED) The vortex generator as recited in claim 1, wherein said surface comprises a rotor blade, said plurality of vorticity generating protuberances located generally parallel to a feathering axis.

5. (ORIGINAL) The vortex generator as recited in claim 1, wherein said plurality of vorticity generating protuberances comprise deployable members.

6. (CANCELED)

7. (PREVIOUSLY PRESENTED) An aerodynamic member comprising:
an outboard section terminating in a tip which generates a primary tip vortex, said outboard section defining a longitudinal axis; and
a plurality of vorticity generating protuberances which extend from a distal end of said tip generally parallel to the longitudinal axis, said plurality of vorticity generating protuberances generate small-scale vortices that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip such that a decay rate of the core is accelerated.
8. (PREVIOUSLY PRESENTED) The aerodynamic member as recited in claim 7, wherein said distal end is a distal end of a rotor blade, said longitudinal axis comprising a feathering axis.
9. (PREVIOUSLY PRESENTED) The aerodynamic member as recited in claim 7, wherein said distal end is a distal end of a wing.
10. (PREVIOUSLY PRESENTED) The aerodynamic member as recited in claim 7, wherein said tip comprises a distal end of a propeller, said longitudinal axis comprising a feathering axis.

11. (PREVIOUSLY PRESENTED) A method of accelerating diffusion of a primary tip vortex comprising the step of:

(1) generating small-scale vortices from a distal end of a surface that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip to destabilize the core of the primary tip vortex such that a decay rate of the core is accelerated.

12. (ORIGINAL) A method as recited in claim 11, wherein step (1) further comprises locating a plurality of vorticity generating protuberances on a tip of a rotating member which generates the primary tip vortex.

13. (ORIGINAL) A method as recited in claim 11, wherein step (1) further comprises locating a plurality of vorticity generating protuberances on a tip of a fixed member which generates the primary tip vortex.

14. (PREVIOUSLY PRESENTED) A method as recited in claim 11, further comprising the step of:

selectively extending a vorticity generating protuberances from a tip which generates the primary tip vortex.

15-17. (CANCELED)

18. (PREVIOUSLY PRESENTED) The aerodynamic member as recited in claim 7, wherein said tip is defined between an upper and lower aerodynamic surface, said longitudinal axis comprising a feathering axis.

19. (PREVIOUSLY PRESENTED) A method as recited in claim 11, further comprising the step of:

selectively extending a vorticity generating protuberance from a tip of a rotor blade which

generates the primary tip vortex in response to an azimuthally position of the rotor blade.

20. (PREVIOUSLY PRESENTED) A method as recited in claim 11, wherein step (1) further comprises locating a plurality of vorticity generating protuberances on a distal end between an upper and lower aerodynamic surface of a tip which generates the primary tip vortex.

21. (CURRENTLY AMENDED) ~~The vortex generator as recited in claim 1, wherein~~
A vortex generator for a surface which generates a primary tip vortex, said vortex generator comprising:

a plurality of vorticity generating protuberances defined upon a distal end of a tip defined between an upper and lower aerodynamic surface to generate small-scale vortices that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip such that a decay rate of the core is accelerated, wherein said plurality of vorticity generating protuberances are of a scale commensurate to a boundary layer thickness.

22. (CURRENTLY AMENDED) ~~The vortex generator as recited in claim 1, wherein~~
A vortex generator for a surface which generates a primary tip vortex, said vortex generator comprising:

a plurality of vorticity generating protuberances defined upon a distal end of a tip defined between an upper and lower aerodynamic surface to generate small-scale vortices that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip such that a decay rate of the core is accelerated, said plurality of vorticity generating protuberances include a multiple of pins.

23. (CURRENTLY AMENDED) ~~The vortex generator as recited in claim 1, wherein~~
A vortex generator for a surface which generates a primary tip vortex, said vortex generator comprising:

a plurality of vorticity generating protuberances defined upon a distal end of a tip defined between an upper and lower aerodynamic surface to generate small-scale vortices that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip such that a decay rate of the core is accelerated, said plurality of vorticity generating protuberances include a multiple of vortex plows.

24. (CURRENTLY AMENDED) ~~The vortex generator as recited in claim 1, wherein~~
A vortex generator for a surface which generates a primary tip vortex, said vortex generator comprising:

a plurality of vorticity generating protuberances defined upon a distal end of a tip defined between an upper and lower aerodynamic surface to generate small-scale vortices that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip such that a decay rate of the core is accelerated, said plurality of vorticity generating protuberances include a multiple of vortex ramps.

25. (CURRENTLY AMENDED) ~~A method as recited in claim 11, wherein step (1)~~
~~further comprises~~

A method of accelerating diffusion of a primary tip vortex comprising the step of:

(1) generating small-scale vortices from a distal end of a surface that are ingested and at least partially entrained within a forming core of the primary tip vortex as the primary tip vortex develops from the tip to destabilize the core of the primary tip vortex such that a decay rate of the core is accelerated while maintaining the primary tip vortex as a single vortex with the core being increasing diffused downstream of the tip.

26. (CURRENTLY AMENDED) ~~A method as recited in claim 11, wherein step (1)~~
~~further comprises~~

A method of accelerating diffusion of a primary tip vortex comprising the step of:

(1) generating small-scale vortices within the core of the primary tip vortex from a distal end of a surface that are ingested and at least partially entrained within a forming core of

~~the primary tip vortex as the primary tip vortex develops from the tip to destabilize the core of the primary tip vortex such that a decay rate of the core is accelerated while generating the small-scale vortices from:~~

27. (PREVIOUSLY PRESENTED) A method of accelerating diffusion of a primary tipvortex comprising the step of:

(1) generating a single primary tip vortex from a distal end of a rotary aerodynamic surface;

(2) generating small-scale vortices from a distal end of the aerodynamic surface that are ingested and at least partially entrained within a forming core of the single primary tip vortex as the primary tip vortex develops from the tip;

(3) maintaining the single primary tip vortex while accelerating a decay rate of the core by the ingested small-scale vortices generated in said step (2).